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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,827

09/22/2006

Hirohisa Tanaka

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AKERMAN SENTERFITT
801 PENNSYLVANIA AVENUE N.W.
SUITE 600
WASHINGTON, DC 20004

EXAMINER

LIAO, DIANA J

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,827	TANAKA ET AL.	
	Examiner	Art Unit	
	DIANA J. LIAO	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/22/2006, 12/21/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claim 7 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/10/2008.

2. Applicant's election without traverse of claims 1-6 in the reply filed on 10/10/2008 is acknowledged. Applicant has also elected that A is La and B is Fe.

3. Restriction requirement sent on 9/10/2008 required a species election for elements A, A', A'', B, and B'. Upon further consideration, this species election requirement is partially withdrawn. Over the course of examination, examiner has found that the identities of B-elements of the compound are obvious alternatives of one another, in light of being similar transition metals and/or very commonly interchanged and partially substituted in perovskite structures.

The resulting examined species is now an oxide where in A is La, with no A', or A''. B, and B' where applicable, may be any of the elements recited in the instant claims.

Priority

4. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 2004-081935 (JAPAN), filed on 3/22/2004.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 2 recite a value δ , which is meant to represent an oxygen excess. It is unclear if this excess is only required if necessitated and is thus optional, or if the excess must exist in some form, but simply does not have a defined maximum.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Guilhamue, et al. ("Palladium-substituted lanthanum cuprates...", 1996).

Guilhaume, et al. teaches a catalyst for use in exhaust gas applications of the formula $\text{La}_2\text{Cu}_{1-x}\text{Pd}_x\text{O}_4$. (abstract) The substitution of palladium for copper has a profound effect on the catalytic activity of the composition, namely raising the activity. (pgs 342-343, Conclusion)

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Although Guilhaume, et al. does not teach the catalytic use of a coupling reaction catalyst, that is an intended use of the oxide product, and thus it does not hold patentable weight. In addition, such a suitable use is found inherent since the limitations of the composition itself is met by the prior art. Therefore, claims 1 and 4-6 are not found patentable over the prior art.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petit, et al. (US 5,447,705).

Petit '705 discloses a catalyst of perovskite structure with the formula $\text{Ln}_x\text{A}_{1-y}\text{B}_y\text{O}_3$, wherein $0 < x < 10$ and $0 < y < 1$. A and B are two different metals chosen from

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groups VIB, VB, VIB, VIIB, or VIII. (claim 1) These groups include Pd and Fe. (col 2, lines 12-18) Ln represents a rare earth metal, which is preferably La, Ce, Pr, Nd, or Sm. (col 2, lines 5-8)

Petit '705 does not teach the exact claimed ranges for the element representing La and the elements representing Fe and Pd for example. However, Petit '705 does specifically teach the claimed elements and also overlapping stoichiometric ranges, creating a *prima facie* case of obviousness.

Examiner notes that the range given for the value of x in the instant claims appears to be in error and a more likely range is 0 to 1. However, it is written consistently throughout the application. In the event that the range is in fact $0 < x < 1$, the claimed range of greater than 1 is still not found to be patentable over the prior art due to the touching range. As drafted, there is no clear patentable difference between a value of 1 (such as in the examples in Petit '705) and greater than 1 as claimed due to significant figures. It is plausible that the value of 1 in the prior art includes values below and above it, such as 0.999 and 1.001, which would overlap with the claimed range.

Regarding the oxygen excess, the examiner has interpreted the value of δ to be an optional amount which is only present if the composition creates the necessity. Therefore, the lack thereof is not found to be outside of the scope of the claims and also one of ordinary skill in the art would appreciate that excess oxygen may be needed to create a stable compound.

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Regarding the use as an exhaust gas purifying catalyst or a coupling reaction catalyst for organic synthesis, these are found to be intended uses for the claimed oxide and are not given patentable weight. It is found inherent that a composition containing the claimed oxide would be suitable for those purposes.

Therefore, claims 1-6 are not found patentable over the prior art.

12. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 2004/005194, Tanaka, et al. (US 7,381,394) used as a translation.

WO '194 teaches a method for making a perovskite-type oxide of the form $A_{1-x}A'_xB_{1-y}B'_yO_3$, wherein $x \leq 0.5$ and $y \leq 0.5$. Element A may be La, B may be Co, Mn or Fe and B' may be Pd. (page 7, lines 4-13) Catalyst examples 5 and 13-15 contain Fe and Pd within the scope of the invention. (pg 31, Table 3)

Regarding the oxygen excess, the examiner has interpreted the value of δ to be an optional amount which is only present if the composition creates the necessity. Therefore, the lack thereof is not found to be outside of the scope of the claims and also one of ordinary skill in the art would appreciate that excess oxygen may be needed to create a stable compound.

Regarding the claimed amount of "A" compounds (e.g. La), WO '194 does not specifically teach a value of greater than 1. However, one of ordinary skill in the art would appreciate that for example $La_{1.00}$ may in fact contain a value slightly higher or slightly lower, but is rounded off for simplicity. For example a compound containing $La_{1.001}$ would both lie within the claimed range, but also rounded off to $La_{1.00}$ as in the

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prior art. A level of accuracy should be claimed for touching or very close ranges.

Therefore, the amount of "A" element and claims 2 and 3 are not found patentable over the prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIANA J. LIAO whose telephone number is (571)270-3592. The examiner can normally be reached on Monday - Friday 8:00am to 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Ngoc-Yen M. Nguyen/
Primary Examiner, Art Unit 1793

DJL